

MS4 STORMWATER MANAGEMENT PLAN

Veterans Affairs Bedford Campus

Bedford, Massachusetts
January 2019

229618.00

VA



**U.S. Department
of Veterans Affairs**



woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

TABLE OF CONTENTS

SECTION	PAGE NO.
EXECUTIVE SUMMARY	ES-1
1. INTRODUCTION.....	1-1
1.1 Stormwater Permitting Program Applicability	1-1
1.2 Summary of Permit Structure	1-1
1.3 Stormwater Management Plan Organization.....	1-1
1.4 Notice of Intent Requirements	1-2
2. CAMPUS INFORMATION	2-1
3. STORMWATER MANAGEMENT PLAN REQUIREMENTS	3-1
3.1 VA Bedford SWMP Team.....	3-1
3.1.1 Protection of Endangered or Threatened Species.....	3-1
3.1.2 Protection of Historic Places.....	3-2
3.1.3 Documentation of Authorization of New or Increased Discharges.....	3-2
3.1.4 Requirement to Meet Water Quality Standards	3-3
4. PUBLIC EDUCATION AND OUTREACH.....	4-1
4.1 Public Education & Outreach Target Audience	4-1
4.2 Proposed BMPs – Public Education and Outreach	4-1
4.2.1 Target Public Education Materials	4-1
5. PUBLIC PARTICIPATION/INVOLVEMENT	5-1
5.1 Public Participation/Involvement.....	5-1
5.2 Proposed BMPs – Public Participation/Involvement.....	5-1
5.2.1 Facilitate Public Review of SWMP and Annual Reports	5-1
6. ILLICIT DISCHARGE DETECTION AND ELIMINATION.....	6-1
6.1 Illicit Discharges Regulated Under this Minimum Control Measures	6-1
6.2 Proposed BMPs – Illicit Discharge Detection and Elimination (IDDE)	6-2
6.2.1 Sanitary Sewer Overflows	6-2
6.2.1.1 Develop Sanitary Sewer Overflow Inventory	6-2
6.2.1.2 Conduct Sanitary Sewer Overflow Reporting	6-3
6.2.2 Update Storm Drain Mapping	6-3
6.2.3 Develop Written Illicit Discharge Detection and Elimination (IDDE) Program	6-4
6.2.3.1 Statement of IDDE Program Responsibilities	6-4
6.2.3.2 Written IDDE Procedures	6-4
6.2.4 Implement IDDE Program.....	6-4
6.2.4.1 Outfall/Interconnection Assessment and Initial Ranking.....	6-4
6.2.4.2 Dry Weather Outfall and Interconnection Screening and Sampling.....	6-4
6.2.4.3 Catchment Investigations	6-5
6.2.4.4 Wet Weather Outfall and Interconnection Screening and Sampling.....	6-5
6.2.4.5 Indicators of IDDE Program Success	6-5
6.2.5 Ongoing Screening.....	6-5
6.2.6 Implement IDDE Program Training.....	6-5
7. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL.....	7-1

7.1	Construction Site Stormwater Runoff Control Measure	7-1
7.2	Proposed BMPs – Construction Site Stormwater Runoff Controls	7-1
7.2.1	Develop Written Construction Site Runoff Control Program	7-1
7.2.2	Conduct Construction Site Inspections	7-2
7.2.3	Implement Construction Site Plan Reviews	7-2
8.	POST-CONSTRUCTION STORMWATER MANAGEMENT	8-1
8.1	Post-Construction Stormwater Management Control Measure	8-1
8.2	Implement Post-Construction Stormwater Management Policy	8-1
8.2.1	Post-Construction Site Runoff Control Program	8-1
8.2.2	Implement New Development Requirements	8-1
8.2.3	Implement Redevelopment Requirements	8-2
8.2.4	Conduct Street and Parking Lot Design Guideline Assessment	8-3
8.2.5	Submission of As-Built Drawings	8-3
8.2.6	Targeting Properties for BMP Retrofits or Modifications	8-3
9.	GOOD HOUSEKEEPING AND POLLUTION PREVENTION	9-1
9.1	Good Housekeeping and Pollution Prevention Control Measure	9-1
9.1.1	Conduct Inventory of VA Bedford Properties	9-1
9.1.2	Develop Stormwater Pollution Prevention Plans	9-1
9.1.3	Development of Operations and Maintenance Programs	9-1
9.1.4	Implement Catch Basin Cleaning Program	9-2
9.1.5	Implement Street Sweeping Program	9-2
9.1.6	Implement Road Salt Use Optimization Program	9-3
9.1.7	Conduct Inspection and Maintenance of Stormwater Treatment Structures	9-3
9.1.8	Employee Training Programs	9-3
10.	PROGRAM EVALUATION, RECORDKEEPING, AND REPORTING REQUIREMENTS	10-1
10.1	Program Evaluation	10-1
10.2	Record Keeping	10-1
10.3	Annual Report	10-1
10.3.1	Annual Report Purpose and Content	10-2
10.3.2	Signature and Certification Requirements	10-2
10.3.3	Mailing Information	10-2
11.	SIGNATORY REQUIREMENT	11-1

TABLES

Table 3-1:	VA Bedford SWMP Team
Table 4-1:	Measurable Goals for Public Education & Outreach Control Measure
Table 5-1:	Measurable Goals for Public Participation/Involvement Minimum Control Measure
Table 6-1:	Measurable Goals for Illicit Discharge Detection and Elimination Control Measure
Table 7-1	Measurable Goals for Construction Site Runoff Control Measure
Table 8-1	Measurable Goals for Post-Construction Runoff Control Measure
Table 9-1	Measurable Goals for Pollution Prevention / Good Housekeeping Control Measure

FIGURES

Figure 1:	Site Locus
-----------	------------

Figure 2: VA Bedford Stormwater Collection System

APPENDICES

Appendix A:	NPDES General Permit for Stormwater Discharges From Small Municipal Separate Storm Sewer Systems in Massachusetts
Appendix B:	Annual Reporting Tables
Appendix C:	Notice of Intent
Appendix D:	Eligibility Documentation
Appendix E:	Sanitary Sewer Overflow Inventory
Appendix F:	Illicit Discharge Detection and Elimination Program
Appendix G:	Construction Site Runoff Program
Appendix H:	Record of Changes

EXECUTIVE SUMMARY

Polluted stormwater runoff is often transported to municipal separate stormwater systems (MS4) and discharged into local waterbodies without treatment. The recently reissued 2016 “National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Separate Storm Sewer Systems” (“2016 MS4 General Permit”, “Permit”) replaces the previously issued 2003 “National Pollution Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems” (“2003 MS4 General Permit”). Like the 2003 MS4 General Permit, the 2016 MS4 General Permit, which will become effective on July 1, 2018, requires operators of MS4s to implement a stormwater management program that will reduce the discharge of pollutants, through implementation of Best Management Practices (BMPs), thereby protecting water quality of the waterbodies which receive discharges from the MS4 and remaining compliant with Permit conditions.

The U.S. Department of Veterans Affairs Bedford Medical Center, also known as the Edith Nourse Rogers Memorial Veterans Hospital (“VA Bedford”, “Campus”), located at 200 Springs Road in Bedford, Massachusetts (**Figure 1**), is subject to the 2016 MS4 General Permit jurisdiction under the Environmental Protection Agency (EPA) as a non-traditional MS4, which is defined by the Permit as any state, federal, county and other publicly owned separate stormwater systems located in an Urbanized Area, as defined by the United States Bureau of Census.

This Stormwater Management Plan (SWMP) is a required element of the 2016 MS4 General Permit. The SWMP, along with the goals and schedules contained herein, represents the VA Bedford’s plans to comply with the 2016 MS4 General Permit over the Permit’s five-year period, 2018 – 2023. The goal of this SWMP is to create a fully integrated plan that provides the VA Bedford with the framework toward achieving compliance with the Permit requirements. The SWMP will be assessed periodically and updated continually to improve stormwater quality, replace ineffective BMPs, and target new discoveries from field work and public outreach efforts. This SWMP takes advantage of ongoing or planned efforts whenever possible.



1. INTRODUCTION

1.1 Stormwater Permitting Program Applicability

The U.S. Department of Veterans Affairs Bedford Medical Center, also known as the Edith Nourse Rogers Memorial Veterans Hospital (“VA Bedford”, “Campus”), located at 200 Springs Road in Bedford, Massachusetts (**Figure 1**), is subject to the 2016 MS4 General Permit jurisdiction under the Environmental Protection Agency (EPA) because it meets the following two criteria:

- 1) The VA Bedford is a non-traditional MS4, which is defined by the Permit as any state, federal, county and other publicly owned properties containing separate stormwater systems; and
- 2) The VA Bedford is in the United States Bureau of Census-defined Boston, Massachusetts Urbanized Area.

Because the VA Bedford meets these criteria, its separate storm sewer system must be permitted as a regulated small MS4. This Permit coverage is a continuance of the VA Bedford’s coverage under the 2003 MS4 General Permit, expanding on the BMPs required by that permit to provide a more prescriptive framework to reduce the discharge of pollutants from the VA Bedford’s MS4 to waters of the United States.

1.2 Summary of Permit Structure

Implementation of the BMPs required by 2016 MS4 General Permit is based on six elements, called “Control Measures” (“CMs”). Each CM contains the framework describing the methodology developed to provide the Permittee with actions designed to reduce pollutant discharges to receiving waterbodies. These CMs are:

- 1) Public Education and Outreach;
- 2) Public Involvement and Participation;
- 3) Illicit Discharge Detection and Elimination;
- 4) Construction Site Stormwater Runoff Control;
- 5) Stormwater Management in New Development and Redevelopment (i.e. Post-Construction Stormwater Management); and
- 6) Good Housekeeping and Pollution Prevention for Permittee Owned Operations.

This SWMP presents each CM and their related requirements in detail in the following sections, as discussed in Section 1.3.

1.3 Stormwater Management Plan Organization

This SWMP has been developed to provide a summary of Permit requirements applicable to the VA Bedford, presented by CM, and represents the VA Bedford’s overall plan for implementation of Permit requirements. Specific documentation required to be developed as part of the Permit will include prescriptive guidance toward meeting Permit requirements. These documents will be included as appendices to this SWMP as they are created for use while implementing related Permit requirements.

Each CM is presented in the order they appear in the Permit, and includes associated BMPs required to be implemented as part of that CM. BMPs listed in this SWMP are not prescriptive, which allows for flexibility of

implementation throughout the Permit cycle. However; it should be noted that all requirements presented in this SWMP originate from specific Permit requirements. As such, each relevant section of the Permit will be reviewed during implementation to verify that the requirements presented therein are incorporated into each BMP. For comprehensive details regarding implementation of the Best Management Practices (BMPs) described in this SWMP, refer to the Permit (**Appendix A**).

Tables presented in each section of this SWMP have been organized to coincide with information submitted in the Notice of Intent (NOI), which is submitted to the EPA to verify the VA Bedford's intent to comply with Permit requirements. Tables include a description of each best management practice (BMP) associated with that CM, the measurable goal associated with each BMP, VA Bedford implementation deadline for the BMP, and the VA Bedford staff responsible for implementation of that BMP.

To facilitate the collection of information required as part of the Permit Annual Reporting process, supporting tables are included in **Appendix B** that provide a template for Annual Reports. Like the tables presented in this SWMP, the **Appendix B** tables include a description of each BMP, the measurable goal associated with each BMP, the Permit implementation deadline, and associated Permit reference section. They also include specific Permit references to information to be included within the Annual Report. EPA may issue an Annual Report template for completion by the permittees; however, in the absence of an EPA provided template, the tables provided in **Appendix B** can be used to fulfill reporting requirements. At a minimum, the tables presented in **Appendix B** contain references toward pertinent permit sections and the deadline for implementation for each BMP.

1.4 Notice of Intent Requirements

The VA Bedford has prepared a NOI in accordance with Permit requirements. This NOI will be submitted to the EPA and MassDEP by the NOI submittal deadline, which is October 1, 2018. A copy of the NOI is provided in **Appendix C**.

2. CAMPUS INFORMATION

This section contains an overview of relevant Campus information for this SWMP.

TOPIC	INFORMATION
Campus Name	Bedford Veterans Affairs Medical Center (Edith Nourse Rogers Memorial Veterans Hospital)
Type of Facility	Federal Hospital Facility
Location of Campus	200 Springs Road Bedford, Massachusetts 01730
Owner Name and Address	Veterans Affairs Edith Nourse Rogers Memorial Veterans Hospital 200 Springs Road Bedford, Massachusetts 01730
Designated Person Accountable for Stormwater Management	Joseph Kitko GEMS Program Manager, Bedford Veterans Affairs Medical Center
Availability of Stormwater Management Plan	Master copy: GEMS Program Manager's Office
Receiving Water Body (Spring Brook)	Class B (no qualifier), 2014 Assessment Unit ID: MA83-14, Size 2.549 miles Description: Wetland northeast of Route 3 Billerica, to confluence with Shawsheen River, Bedford
Spring Brook Listed Impairment Information	None listed
Spring Brook Total Maximum Daily Load(s)(TMDL)	Fecal coliform
Receiving Water Body (Shawsheen River)	Class B (TWS, WWF) 2014 Assessment Unit ID: MA83-01, Size 1.625 Miles Description: Summer Street (historically listed as Maquire Road) to confluence with Spring Brook, Bedford.
Shawsheen River TMDL	Fecal coliform
Shawsheen River Listed Impairment Information	Physical substrate habitat alterations Dissolved oxygen Sedimentation/siltation

3. STORMWATER MANAGEMENT PLAN REQUIREMENTS

As discussed in Section 1.4, the contents of this SWMP are based on Part 1.10.2 of the Permit, “Contents and Timelines of the Stormwater Management Program for 2003 permittees”. This Permit section provides requirements for information that must be included in the SWMP within specific timeframes of the Permit effective date. The information incorporated into this SWMP includes all information required to be included during the Permit period. The following subsections provide information required within the SWMP that are not part of the BMPs included in other sections.

3.1 VA Bedford SWMP Team

The VA Bedford stormwater management team will be comprised of the representatives from Engineering, Grounds, Maintenance and Operations, and the Green Environmental Management System (GEMS) Program Manager, acting as the Team Leader.

Table 3-1: VA Bedford SWMP Team

Team Leader: GEMS Program Manager
Responsibilities: Coordinating SWMP activities, monitoring of SWMP goals and BMPs, dissemination of stormwater educational content, public involvement with the stormwater program, investigating stormwater issues and concerns, Chairperson of the VA Bedford’s SWMP Team, submitting the annual reports to EPA and MassDEP, SWMP education and training.
Member: Engineering / GEMS Office
Responsibilities: Implements construction and post-construction stormwater management requirements. Involved in the investigation and elimination of illicit discharges and sanitary sewer overflows.
Member: Maintenance & Operations / GEMS Office
Responsibilities: Oversees maintenance of VA Bedford facilities, grounds, and MS4 infrastructure. Involved in illicit discharge detection processes.
Member: Grounds Service / GEMS Office
Responsibilities: Oversees maintenance of VA Bedford facilities, grounds, and MS4 infrastructure. Involved in illicit discharge detection processes.

3.1.1 Protection of Endangered or Threatened Species

In accordance with Part 1.9.1, the VA Bedford evaluated stormwater discharges or discharge related activities whose unmitigated, direct, indirect, interrelated, interconnected, or interdependent impacts may adversely affect any species that are listed as endangered or threatened under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is designated as critical under the ESA are not eligible for coverage under the Permit. To conduct this evaluation, VA Bedford consulted with the United States Department of the Interior Fish and Wildlife Service (FWS) to identify threatened, endangered, proposed and candidate species, as well as proposed

and final designated critical habitat that may be located within the VA Bedford boundary and/or affected by MS4 operations within the VA Bedford.

Based on this consultation, the FWS identified one listed endangered species where the VA Bedford is located; the Northern Long-eared Bat. No Critical Habitats were identified in proximity to the VA Bedford or any of the system outfalls. Discharges originating from MS4 operations are not likely to adversely affect the Northern Long-eared Bat or its habitat based on the implementation of best management practices (BMPs) described in this SWMP. The VA Bedford will continue to evaluate control measures and BMPs described within this SWMP to verify that they are sufficiently protective of the Northern Long-eared Bat and will adjust control measures and BMPs, as necessary, throughout the duration of the Permit if the evaluation identifies conditions that may affect this species. As such, the VA Bedford is eligible for Permit coverage under Eligibility Criterion C.

The FWS consultation letter documenting the process used to make this determination, which was submitted to the FWS as part of this SWMP development, is included in **Appendix D**.

3.1.2 Protection of Historic Places

The VA Bedford was evaluated in accordance with the methodology presented in Appendix D of the Permit to determine eligibility for coverage under the Permit. Using the Appendix D screening process, Question 1, which states:

“Is the facility an existing facility authorized by the previous permit or a new facility and the applicant is not undertaking any activity involving subsurface land disturbance less than one acre?”

The VA Bedford has determined that they are an existing facility authorized by the 2003 MS4 General Permit. As such, a certification statement has been prepared for submittal to the EPA stating the VA Bedford is eligible for Permit coverage under Criterion A. Per the Permit requirements, the VA Bedford does not need to contact the state Historic Commission to make any further determinations regarding the potential of MS4 discharges to affect historic places at the site, and no further obligations are required to fulfill coverage under this portion of the Permit. A copy of the Historic Places certification statement to be submitted to EPA upon the effective date of the Permit is provided in **Appendix D**.

The VA Bedford is identified on the National Register of Historic Places (NHRP). The VA Bedford will continue to assess areas of stormwater discharges, allowable non-stormwater discharges, and/or stormwater discharge-related activities originating from the VA Bedford that may affect structures and properties located on campus. The results of these assessments will be periodically evaluated throughout the Permit term to determine whether additional actions are required to mitigate the effects of stormwater discharges to historic properties, should they occur.

3.1.3 Documentation of Authorization of New or Increased Discharges

Currently, no new or increased discharges, including increased pollutant loadings through the MS4, are originating from the VA Bedford. To make this determination, the VA Bedford evaluated its current MS4 discharges within the framework of the provisions specified in Massachusetts antidegradation regulations at 314 CMR 4.04. Discharges and pollutant loadings originating from the VA Bedford will be periodically evaluated through implementation of Permit conditions throughout the duration of the Permit to verify conformance with this requirement, as well as additional MassDEP approvals, as applicable.

Similarly, per Part 2.2.2 of the Permit, the VA Bedford is obligated to comply with additional requirements presented in Appendix H of the Permit if the MS4 discharges to a “water quality limited water body”, which is a water body that does not meet applicable water quality standards, including but not limited to waters listed as Category 4b or Category 5 in the most recent version of the “Massachusetts Integrated List of Waters”. Obligations to meet water quality standards are discussed further in Section 3.1.4. The VA Bedford should review the most recent “Massachusetts Integrated List

of Waters” throughout the Permit term to determine whether the classification of waterbodies receiving MS4 discharges from the VA Bedford has changed from previous versions of that document. For this SWMP, the “Massachusetts Year 2014 Integrated List of Waters” was used to determine any additional requirements the VA Bedford should implement during the Permit term.

3.1.4 Requirement to Meet Water Quality Standards

Discharges of any pollutant into any water for which a TMDL has been established or approved by the EPA, unless the discharge is consistent with the TMDL, are not eligible for coverage under the Permit. Stormwater runoff from impervious surfaces at the VA Bedford, such as parking lots, roads, walkways, and roofs is collected by the facility separate stormwater collection system (**Figure 2**). The VA Bedford’s current understanding of their stormwater collection system is that segments of their MS4 interconnect with the Town of Bedford’s MS4, ultimately discharging to the Shawsheen River to the south-southeast, with other segments of the MS4 discharging to an intermittent tributary of Fawn Lake, ultimately discharging to Spring Brook to the south-southeast.

Based on the “2014 Integrated List of Waters for Massachusetts”, the segment of Spring Brook ultimately receiving discharge from the VA Bedford is listed as a Category 4a with an established TMDL for fecal coliform. The segment of the Shawsheen River receiving discharge from the VA Bedford is listed as a Category 5 waterbody that also has an established TMDL for fecal coliform. In addition, this segment of the Shawsheen River has listed impairments for physical substrate habitat alterations, dissolved oxygen, and sedimentation/siltation. BMPs have been incorporated into this SWMP to account for requirements presented in Appendix F (“Requirements for Discharges to Impaired Waters with an Approved TMDL”) of this Permit to meet additional obligations associated with the Spring Brook and Shawsheen River TMDLs. Impairments identified for the segment of the Shawsheen River receiving stormwater discharges from the VA Bedford do not have additional requirements associated with them.

A summary of the waterbody segment receiving flow from the MS4, the number of outfalls discharging into that waterbody segment, the TMDL status for the receiving waterbody, and the impairment cause are provided in the table below.

Waterbody	MassDEP Segment ID	Number of Discharging Outfalls	TMDL(s)	Category	Impairment(s)
Spring Brook	MA83-14	To be determined	<ul style="list-style-type: none"> Fecal coliform 	4a	<ul style="list-style-type: none"> None Listed
Shawsheen River	MA83-01	To be determined	<ul style="list-style-type: none"> Fecal coliform 	5	<ul style="list-style-type: none"> Physical substrate habitat alterations Dissolved oxygen Sedimentation/siltation

4. PUBLIC EDUCATION AND OUTREACH

4.1 Public Education & Outreach Target Audience

Because the VA Bedford is a facility rather than a municipality, the target audience for public education and outreach has a more limited scope. For this SWMP, the term “public” will be interpreted as VA Bedford employees, patients, visitors, and on-site contractors. It is important to identify the appropriate target audience and to understand how they receive information when implementing this CM.

These individuals currently obtain information relating to the VA Bedford campus through a variety of sources, as described below. VA Bedford’s SWMP utilizes these existing communications pathways to raise public awareness and provide education about what stormwater is, where it goes at the VA Bedford, sources of storm water pollution and their impact on water quality.

4.2 Proposed BMPs – Public Education and Outreach

The VA Bedford will continue to implement and/or incorporate the following program elements or BMPs to address this CM during the permit term. Impaired and TMDL statuses of waterbodies receiving MS4 discharges from the Campus will be periodically evaluated through consultation with the most recent MassDEP Massachusetts Integrated List of Waters to determine the need to add or change educational messages related to specific pollutants identified in receiving waterbodies.

4.2.1 Target Public Education Materials

The VA Bedford public currently obtains stormwater information relating to the VA Bedford campus through dissemination of periodic electronic and hard copy stormwater related updates and policies through quarterly newsletters, employee training opportunities, contractor educational talks, MS4 infrastructure marking, and the VA Bedford intranet. The educational program will be evaluated and updated, if necessary, to include other methods of message distribution and targeted educational messages based on stormwater issues related to the VA Bedford.

A minimum of two educational messages to each of four audiences will be distributed to the public over the permit term. Based on the VA Bedford’s public audience, educational messages will target employees, patients, visitors, and on-site contractors, and may vary in content based on each audiences’ role within the VA Bedford community. Specific educational messages regarding bacteria impacts will be distributed at an increased frequency due to the TMDL statuses of Spring Brook and the Shawsheen River. Increased bacteria educational messaging will occur annually and be directed toward audiences to encourage the proper management of pet waste.

The VA Bedford may modify or supplement public education messages with the education and outreach resources available at the EPA’s website, <http://cfpub.epa.gov/npstbx/index.html>, or other relevant resources.



Table 4-1: Measurable Goals for Public Education & Outreach Control Measure

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
1-1	Target Public Education Materials			
	GEMS Office	Develop and implement targeted public education messages.	Development and implementation of a targeted public education program incorporating Permit requirements to employees, patients, visitors, and on-site contractors.	End of Permit Year 1
	GEMS Office	Distribute educational messages to target audiences.	Distribute a minimum of 1 educational message to each target audience by the end of Permit Year 2.	End of Permit Year 2
			Distribute a minimum of 1 educational message to each target audience by the end of Permit Year 5.	End of Permit Year 5
1-2	Provide Public Education Materials Related to TMDL (Charles River) Status for Escherichia coli			
	GEMS Office	Supplement public education and outreach with annual timed messages on bacteria-specific topics.	Include bacteria-specific educational messages in development of education and outreach materials in BMP 1-1. Distribute education and outreach messages in accordance with Permit timeframes.	Annually during Permit term

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
1-3	Evaluate Effectiveness of Public Education Messages			
	GEMS Office	Evaluate effectiveness of public educational messaging prior to next message delivery.	Assess effectiveness of the educational program and modify messages, if needed.	Annually during Permit term

5. PUBLIC PARTICIPATION/INVOLVEMENT

5.1 Public Participation/Involvement

An effective method of gaining long term support and awareness of the VA Bedford's SWMP is to get the public involved. As with the Public Education and Outreach CM described in Section 4, the term "public" will be interpreted as VA Bedford employees, patients, visitors, and on-site contractors.

5.2 Proposed BMPs – Public Participation/Involvement

The VA Bedford will develop the following program elements or BMPs to address this CM during the permit term.

5.2.1 Facilitate Public Review of SWMP and Annual Reports

The public will be provided notice of the availability of the SWMP and Annual Report for their review and comment in accordance with MGL Chapter 30A, Sections 18-25, effective July 10, 2010. Comments and feedback provided by the public during this review process will be considered within the context of the VA Bedford's stormwater related operations and integrated into applicable documents, where feasible. Opportunities to provide public participation will be evaluated during the permit term.

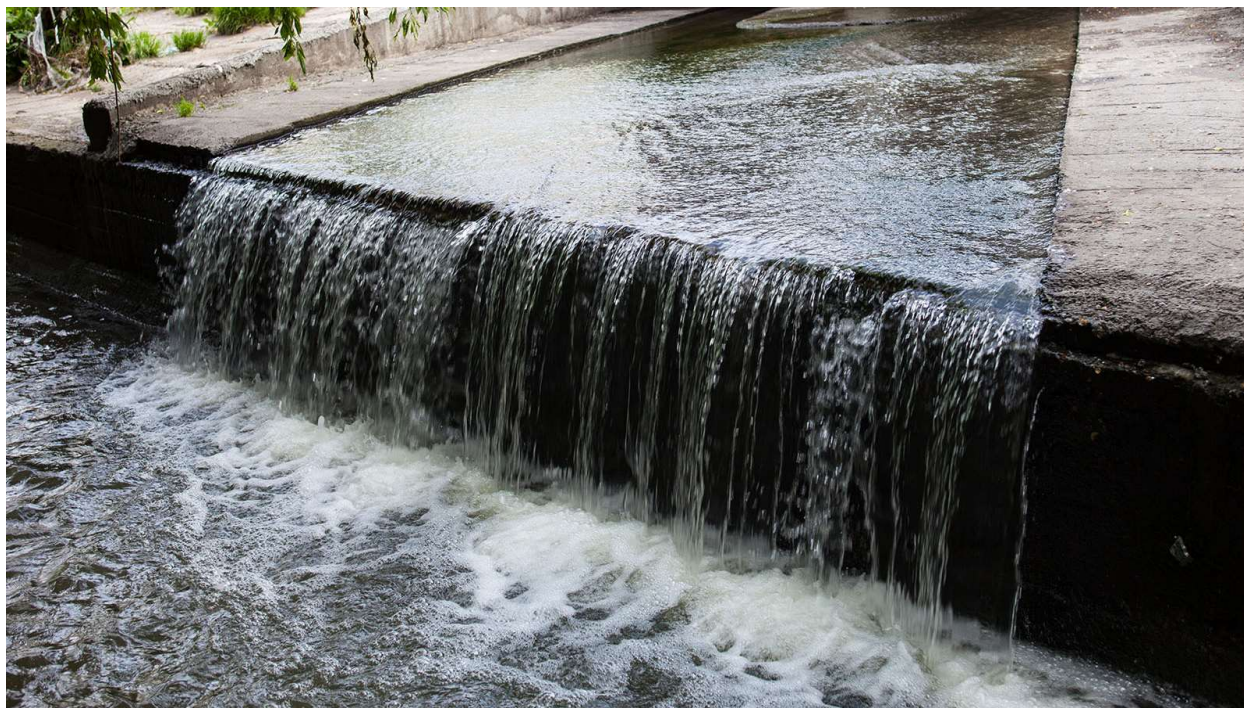


Table 5-1: Measurable Goals for Public Participation/Involvement Minimum Control Measure

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
2-1	Public review and participation of Stormwater Management Plan and Annual Reports			
	GEMS Office	Post/provide the Stormwater Management Plan (SWMP) and all Annual Reports to the public for review and comment (following public notice requirements).	Provision of the SWMP and Annual Report to the public.	Annually
	GEMS Office	Allow annual public participation in review and implementation of the SWMP	Allow and/or facilitate public review/comment of SWMP annually.	Annually

6. ILLICIT DISCHARGE DETECTION AND ELIMINATION

6.1 Illicit Discharges Regulated Under this Minimum Control Measures

Illicit discharges into the VA Bedford's storm drain system are defined by EPA as "...any discharge to an MS4 that is not composed entirely of storm water..." Exceptions include permitted industrial sources and discharges from fire-fighting activities.

The EPA has listed several potential sources of illicit discharges within their Control Measure fact sheet on the topic. Examples of illicit discharges include:

- Sanitary wastewater
- Effluent from septic tanks
- Car wash wastewaters
- Improper oil disposal
- Radiator flushing disposal
- Laundry wastewaters
- Spills from roadway accidents
- Improper disposal of auto and household toxics

These illicit discharges can enter a storm drain system either through a direct connection (e.g., wastewater piping connected directly to the storm drain) or indirectly (e.g., spills, dumped chemicals, cracks in sanitary sewers). A program to detect and eliminate both direct and indirect illicit discharges into the VA Bedford's storm drain system is addressed within this section.

Certain discharges are not regulated within this control measure. Therefore, if any of the following discharges are observed over the course of implementing this control measure, the EPA allows them to be excluded from stormwater mitigation actions, unless the VA Bedford determines they are causing or contributing to water quality issues.

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains

- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water
- Residential building wash waters without discharges

Discharges or flows generated from fire-fighting activities are allowed under the Permit. These types of flows only require consideration if they are identified as a significant source of pollutants to receiving waterbodies.

6.2 Proposed BMPs – Illicit Discharge Detection and Elimination (IDDE)

The following BMPs will be implemented and evaluated at the VA Bedford. The overall goal is to determine the locations of illicit discharges (to the maximum possible extent) and to remove or correct those illicit discharges in an appropriate and timely manner.

The VA Bedford's existing program for detecting or eliminating illicit discharges within its storm drain system has been removing illicit discharges whenever they are found during system operation and maintenance. The VA Bedford is committed to implementing an IDDE Program using a proactive approach.

The first step in implementing an illicit detection and elimination program is the generation of a comprehensive, up-to-date drainage map and associated database. The current drainage map, which was produced in 2008, is provided as **Figure 2**. Annual review of VA Bedford's stormwater drainage system by the SWMP Team will help ensure the accuracy of this database.

6.2.1 Sanitary Sewer Overflows

Sanitary sewer overflows (SSOs) are defined as a release of untreated sewage discharged from a sanitary sewer into the environment prior to treatment, including backups into buildings or other structures. SSOs occur when raw or partially treated sewage from a sanitary sewer collection system enters the environment through an overflow, spill or other release. These types of releases often contaminate waterbodies, degrading water quality and exposing humans to potentially serious health issues.

6.2.1.1 Develop Sanitary Sewer Overflow Inventory

To mitigate the effects of SSOs to waterbodies, VA Bedford will identify all known locations where SSOs have discharged to the MS4 within the previous 5 years. This information will be stored within a database or similar method and include the following information, as available:

- Location;
- Statement of whether the discharge entered a waterbody directly or through the MS4 discharge;
- Date and time of each known SSO occurrence;
- Estimated volume of SSO;
- Known or suspected cause of SSO;
- Corrective measures completed to eliminate SSO, along with dates implemented; and
- Corrective measures planned, with implementation schedule, if measures have not been completed.

The inventory is included in **Appendix E** of this SWMP and is updated annually, as new information is obtained. An update of the SSO inventory will also be included in the Annual Report, along with a discussion of any corrective measures implemented to address SSOs during the reporting period.

6.2.1.2 Conduct Sanitary Sewer Overflow Reporting

If a SSO is identified, VA Bedford will work to eliminate the SSO as soon as possible. Interim mitigation measures will be taken to minimize SSO discharges until the discharge is eliminated. The VA Bedford will notify EPA verbally within 24 hours of identifying a SSO and provide written notice to EPA and MassDEP within 5 days, including information with the updated inventory, as discussed in Section 5.2.1.1.

For MassDEP reporting, use the notification form and related submittal instructions provided on their website, <http://www.mass.gov/eea/agencies/massdep/service/approvals/sanitary-sewer-overflow-bypass-backup-notification.html>.

There is no specified format for SSO reporting to the EPA. For EPA reporting, the VA Bedford will contact Doug Koopman at 1-617-918-1747 and/or via email at Koopman.douglas@epa.gov. The following contact information is also applicable for SSO reporting:

MassDEP: Northeast Region
Phone: 978-694-3215
Address: 205B Lowell Street, Wilmington, MA 01887

EPA: Region 1
Phone: 617-918-1510
Address: 5 Post Office Square, Boston, MA 02109

6.2.2 Update Storm Drain Mapping

The first step in implementing an illicit detection and elimination program is the generation of a comprehensive, up-to-date storm drainage map and associated database. In 2008, VA Bedford produced a storm water drain map via AutoCAD showing manholes, catch basins, pipes, and outfall locations. As part of the implementation of the Permit requirements, this map will be updated within 2 years of the Permit effective date to include information specified in Part 2.3.4.5.a through Part 2.3.4.5.b, as necessary. MS4 information required to be mapped includes the following elements. Elements with a "*" were required to be mapped as part of the 2003 MS4 General Permit requirements:

- Outfalls and receiving waters*;
- Open channel conveyances (swales, ditches, etc.)*;
- Interconnections with other MS4s and other storm sewer systems*;
- MS4-owned stormwater treatment structures (e.g. detention and retention basins, infiltration systems, bioretention areas, water quality swales, gross particle separators, oil/water separators, or other similar systems)*;
- Impaired or TMDL waterbodies receiving discharge from the VA Bedford MS4*;
- Initial catchment delineations*;
- Outfall locations (latitude and longitude within +/- 30 feet);
- Pipes;
- Manholes;
- Catch basins;
- Refined catchment delineations;
- Sanitary sewer system (if available); and
- Combined sewer system (if available).

Additional MS4 components that are recommended to be mapped during the current Permit term are included in Part 2.3.4.5.c. Progress toward completion of the MS4 system mapping will be summarized in each Annual Report. Annual

review of VA Bedford's stormwater drainage system by the SWMP Team will help ensure the accuracy of this database. A copy of the VA Bedford's current stormwater drainage map is included as **Figure 2**.

6.2.3 Develop Written Illicit Discharge Detection and Elimination (IDDE) Program

The inventory and mapping components described above provide the framework for investigation and detection of illicit discharges into the VA Bedford's MS4. The 2016 MS4 General Permit's IDDE Program requirements build on the 2003 MS4 General Permit requirements that Permittees are obligated to develop and implement an IDDE Program by requiring components of the IDDE Program to be recorded in a written document. The IDDE Program document can be maintained electronically or hard copy and must include the components discussed in the following sections.

Per Permit requirements, a written IDDE Program will be developed during Permit Year 1 and included in this SWMP as **Appendix F**.

6.2.3.1 Statement of IDDE Program Responsibilities

The VA Bedford's written IDDE Program will clearly identify departments and/or personnel (by title) who are responsible for implementing the VA Bedford IDDE Program. This includes, but is not limited to, personnel responsible for plumbing inspections, catch basin cleaning and maintenance, outfall inspections, drain system investigations, sewer system inspections, and personnel overseeing construction activities related to tie-in to the MS4 or other subsurface conduits.

6.2.3.2 Written IDDE Procedures

As part of the VA Bedford's IDDE Program, written procedures pertaining to implementation of the IDDE Program will be recorded within that document. Procedures to be documented in the IDDE Program Manual include, at a minimum, dry weather outfall and interconnection screening and sampling, catchment investigations; and wet weather screening and sampling, as described in the following sections.

6.2.4 Implement IDDE Program

Implementation of the written IDDE Program focuses on the following elements: outfall/interconnection assessment and initial ranking; dry weather outfall and interconnection screening and sampling; catchment investigations; and wet weather screening and sampling.

6.2.4.1 Outfall/Interconnection Assessment and Initial Ranking

Using the information obtained and recorded in the storm drain mapping requirement discussed in Section 6.2.2, the VA Bedford will inventory each outfall located at the VA Bedford and interconnection to non-VA Bedford MS4 systems discharging from the VA Bedford MS4, record the outfall or interconnection location and condition, and track and record inspections, screenings, and other activities conducted at the outfall or interconnection in accordance with the IDDE Program.

Criteria such as past discharge complaints, poor receiving water quality, age of infrastructure, etc. will be used to rank each outfall/interconnection into one of the following categories: Problem, High Priority, or Low Priority. Information obtained during this assessment and initial ranking procedure will be used to determine the order that outfalls and interconnections will be screened, as specified in Section 6.2.4.2.

6.2.4.2 Dry Weather Outfall and Interconnection Screening and Sampling

Outfalls and interconnections identified as "High Priority" or "Problem" during the ranking process discussed in Section 6.2.4.1 will be screened and sampled if discharge is observed during dry weather conditions, prior to outfalls and interconnections identified as "Low Priority". The VA Bedford will develop a dry weather outfall and interconnection screening and sampling procedure and incorporate it within their IDDE Program Manual using the methodology

provided in the Permit. Information obtained during the screening process will be used to update and/or reprioritize rankings discussed in Section 6.2.4.1.

6.2.4.3 Catchment Investigations

The VA Bedford will develop a systematic procedure to investigate each catchment associated with an outfall or interconnection to their MS4. This catchment investigation procedure will include sufficient methods to facilitate isolation and confirmation of sources of illicit discharges using maps, historic plans and records, manhole inspections, and other pertinent information, as presented in the Permit. Information obtained during the catchment investigation program will be used to identify system vulnerability factors (SVFs), which in turn will trigger wet weather sampling requirements presented in Section 6.2.4.4.

6.2.4.4 Wet Weather Outfall and Interconnection Screening and Sampling

Per the catchment investigation requirements discussed in Section 6.2.4.3, when a SVF is identified, based on previous information or dry weather investigation results, a wet weather investigation must be conducted at the identified outfall or interconnection. The VA Bedford will perform wet weather investigations consisting of the same parameters to be implemented for dry weather screening and sampling, during or after a storm event sufficient to produce stormwater discharge. Results of the investigation will be recorded and reported in each Annual Report.

6.2.4.5 Indicators of IDDE Program Success

The following indicators of successful implementation of the IDDE Program will be tracked and evaluated in each Annual Report:

- The number of SSOs and illicit discharges identified and removed;
- The number and percent of total outfall catchments served by the MS4 evaluated using the catchment investigation procedures;
- All dry and wet weather screening results; and
- The volume of sewage removed from the MS4.

This information will be used by the VA Bedford to determine the overall effectiveness of the IDDE Program.

6.2.5 Ongoing Screening

Using the information obtained during the catchment investigation and illicit discharge removal procedures, outfalls and interconnections will be reprioritized for screening in accordance with the Permit schedules. This will include dry weather screening, as presented in Section 6.2.4.2 and wet weather screening, if necessary, as presented in Section 6.2.4.4.

6.2.6 Implement IDDE Program Training

The VA Bedford will train all employees involved in IDDE Program implementation annually, with specific focus on how to identify illicit discharges and SSOs. Types and frequencies of trainings will be summarized in each Annual Report.

Table 6-1: Measurable Goals for Illicit Discharge Detection and Elimination Control Measure

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
3-1	Illicit Discharge Reporting			
	GEMS Office, Engineering Office, Maintenance and Operations Office	Locate, identify, and eliminate illicit discharges as quickly as possible.	Elimination of illicit discharges upon verification; reporting illicit discharges as required.	Throughout Permit term, with elimination of verified illicit discharges as soon as possible.
3-2	Develop Sanitary Sewer Overflow (SSO) Inventory			
	GEMS Office; Engineering Office	Develop and maintain an inventory of all identified SSOs discharged to the MS4 within the past 5 years.	Production of SSO inventory, including required information related to the SSO.	End of Permit Year 1
3-3	Update Storm Drain System Mapping			
	Engineering Office	Verify and/or incorporate Phase I mapping elements into MS4 map.	Completion of an updated MS4 map containing all required Phase I elements.	End of Permit Year 2
	Engineering Office	Verify and/or incorporate Phase II mapping elements into MS4 map.	Completion of a MS4 map containing all required Phase II elements.	End of Permit Year 10
3-4	Develop Written Illicit Discharge Detection and Elimination Program			
	GEMS Office, Engineering Office	Develop a written Illicit Discharge Detection and Elimination (IDDE) Program.	Development and implementation of a written IDDE Program Manual containing all required elements.	End of Permit Year 1

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
3-5	Implement Written IDDE Program: Dry Weather Outfall/Interconnection Screening and Sampling			
	GEMS Office; Engineering Office	Conduct dry weather outfall/interconnection screening and sampling for required parameters.	Implement dry weather outfall/interconnection screening and sampling for required parameters within Permit timeframe.	End of Permit Year 3
3-6	Implement Written IDDE Program: Wet Weather Outfall/Interconnection Screening and Sampling			
	GEMS Office; Engineering Office	Develop written catchment investigation procedure in accordance with Permit requirements.	Implement catchment investigation procedures in accordance with Permit requirements.	End of Permit Year 1
	GEMS Office; Engineering Office	Develop wet weather outfall/interconnection screening and sampling procedures for required parameters.	Conduct wet weather screening and sampling procedures within Permit timeframe.	By end of Permit Year 2
3-7	Evaluate IDDE Program Success			
	GEMS Office	Evaluate effectiveness of IDDE Program using indicators defined in the IDDE Program Manual.	Provide evaluation of IDDE Program annually in the Annual Report	During Permit term, document annually in Annual Report
3-8	Ongoing Screening Requirements			
	GEMS Office; Engineering Office	Evaluation of wet and dry weather screening data; implement screening procedures as necessary.	Complete ongoing outfall screening upon completion of IDDE Program.	Ongoing screening once every 5 years upon completion of catchment investigations.
3-9	Implement IDDE Program Training			
	GEMS Office	Provide annual training to employees involved in the IDDE Program.	Provide and/or conduct annual training to all employees involved in the IDDE Program. Report on the frequency and type of employee training in the Annual Report.	Annually (at a minimum)

7. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

7.1 Construction Site Stormwater Runoff Control Measure

Stormwater generated from unstabilized construction sites has the potential to contribute significant quantities of sediment and construction activity related pollutants into the VA Bedford's MS4, which ultimately discharges to the Charles River located generally to the west of the site. The Permit-required BMPs listed in this section of the SWMP have been developed to minimize the contribution of pollutants to stormwater generated on construction sites within the VA Bedford, which will ultimately maintain or improve water quality of waterbodies receiving MS4 discharges.

For the purposes of the Permit, construction sites equal to or greater than one acre disturbed, or construction sites that are part of a larger common development equal to or greater than one acre disturbed, are obligated to fulfill the following requirements presented in the BMPs below. The one-acre threshold was selected to conform to requirements specified in the EPA's Construction General Permit, which mandates permit coverage separate and beyond the Permit requirements. References to construction projects and activities within the following sections refer to projects exceeding the one-acre threshold, as described above.

7.2 Proposed BMPs – Construction Site Stormwater Runoff Controls

The following BMPs will be implemented or continue to be implemented at the VA Bedford to mitigate the contribution of pollutants generated from applicable construction activities to stormwater entering the MS4.

7.2.1 Develop Written Construction Site Runoff Control Program

To provide contractors, construction site operators, and other parties responsible for implementation of construction activities at the VA Bedford with guidance pertaining to the applicability and usage of erosion and sedimentation control practices, the VA Bedford will review existing design specifications, contract language, and construction related procedures and synthesize relevant documents into a written construction site runoff control program that meets Permit requirements. This process, which will result in the creation of a formal written document, will include controls for other wastes often generated from construction activities, such as sanitary waste, litter, concrete truck washout, chemicals, discarded building materials, and demolition debris. Specifically, the written program will include the following elements:

- Mechanism requiring the use of sediment and erosion controls, as well as control of wastes generated from construction activities (demolition debris, litter, sanitary waste, etc.);
- Written procedures for site inspections and enforcement of sediment and erosion control measures; and
- Pre-construction site plan review processes incorporating procedures for the consideration of potential water quality impacts and use of low impact development and/or green infrastructure.

Where land disturbance activities may result in a discharge of stormwater to the MS4, construction site operators will be required to develop and implement BMPs appropriate to conditions at the construction site. This requirement may be fulfilled as part of the Stormwater Pollution Prevention Plan (SWPPP) develop requirements specified in EPA's Construction General Permit. The VA Bedford will request and review SWPPPs prepared for applicable projects to determine compliance with MS4 General Permit requirements. A copy of the written construction site runoff program is included in **Appendix G**.

7.2.2 Conduct Construction Site Inspections

The VA Bedford SWMP Team will perform periodic inspections of applicable construction projects underway on the VA Bedford campus. These periodic inspection procedures will be documented and will clearly define personnel responsible for construction site inspections and authority to implement enforcement actions.

The Construction General Permit requires the construction site owner to have a “qualified professional” conduct the following inspections as a minimum condition of coverage under that permit:

- An initial inspection prior to the commencement of construction;
- At least every 7 calendar days after construction commences;
- Within 24 hours of the end of a storm event generating 0.25” or more of precipitation;
- Final inspection prior to finalizing the Notice of Termination to certify that the site has undergone final stabilization and all temporary erosion and sedimentation controls have been removed.

A “qualified professional” is defined as a person that is knowledgeable in the principals and practices of erosion and sedimentation control, who has the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls installed to meet the requirements of the Construction General Permit.

As part of this BMP, a designated VA Bedford SWMP team member will perform periodic inspections of construction projects to evaluate the adequacy of the construction inspection program being implemented by the contractor and assess the overall site condition relative to sedimentation and erosion. These inspections are not intended to be as comprehensive as the inspections required under the Construction General Permit. They are intended to verify that the inspection program required as part of the Construction General Permit coverage is being performed in accordance with that Plan. The VA Bedford will leverage construction site inspections required under the Construction General Permit to fulfill the less stringent MS4 General Permit construction site inspection requirements.

7.2.3 Implement Construction Site Plan Reviews

The VA Bedford will implement written procedures for site plan review, inspection, and enforcement, including the following elements:

- Pre-construction review of site design;
- Planned operations and BMPs to be implemented at the construction site; and
- Planned BMPs to be implemented to manage post-runoff construction.

These procedures will include consideration of potential water quality impacts related to construction projects. Additionally, the VA Bedford will review and implement projects in accordance with internal policies regarding use of low impact design and green infrastructure, such as “Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act” (VA EISA Section 438), where applicable. Review, inspection, and enforcement actions will be tracked and included in each Annual Report submittal.

Table 7-1 Measurable Goals for Construction Site Runoff Control Measure

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
4-1	Adopt Requirements for Construction Operator Erosion and Sedimentation Control Program Implementation			
	Engineering Office; GEMS Office	Adopt a mechanism requiring use of sediment and erosion control practices at construction sites, including control of construction related wastes.	Implementation of mechanism to control stormwater runoff and waste control originating from construction sites.	End of Permit Year 1
	Engineering Department; GEMS Office	Require construction site operators to implement a sediment and erosion control program including BMPs appropriate for the construction site conditions.	Verification of construction site operator development and implementation of a Construction General Permit Stormwater Pollution Prevention Plan for applicable construction projects occurring at the VA Bedford.	End of Permit Year 1.
4-2	Develop Written Construction Site Runoff Control Program			
	GEMS Office; Engineering Office	Develop written procedures for site inspections, enforcement of sediment and erosion control measures.	Implement and document written construction site inspections, enforcement actions.	End of Permit Year 1
4-3	Conduct Site Plan Reviews			
	Engineering Office; GEMS Office	Develop written procedures for site plan review incorporating Permit required elements.	Implement written site plan review process, including pre-construction review and BMP use evaluation.	End of Permit Year 1

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
4-4	Conduct Site Inspections			
	GEMS Office; Engineering Office	Develop written procedures to document site inspection and enforcement activities.	Implement and document site inspection activities and conduct enforcement activities, as required.	End of Permit Year 1

8. POST-CONSTRUCTION STORMWATER MANAGEMENT

8.1 Post-Construction Stormwater Management Control Measure

Post-construction stormwater management is an important step toward decreasing the volume and pollutant discharge in stormwater through installation of permanent stormwater control practices during expansion and/or modification of the Campus. The goal of the MS4 Program is to mitigate the long-term impacts of new and redevelopment projects on water quality using appropriate stormwater runoff controls, low impact development and runoff reduction practices.

The BMPs discussed in this section will provide the framework and methodology to assist the VA Bedford with the development and implementation of a post-construction stormwater management program. Like the construction stormwater management CM discussed in Section 7, this portion of the Permit requirements relate to construction sites equal to or greater than one acre, or construction sites that are part of a larger common development equal to or greater than one acre.

8.2 Implement Post-Construction Stormwater Management Policy

The objective of post-construction runoff control is to minimize the impacts of stormwater runoff from new development to receiving waters once construction activities are completed. The VA is currently implementing several policies to manage post-construction site stormwater runoff, most notably through implementation of VA EISA Section 438 procedures.

The VA Bedford proposes to implement existing practices, where established, and/or develop the following program elements or BMPs to address this CM during the permit term.

8.2.1 Post-Construction Site Runoff Control Program

The VA Bedford will develop and implement guidance in the form of written policies and/or procedures to provide engineers/designers, contractors, and other parties responsible for the planning and design of structures during construction activities at the site with mechanisms to reduce post-construction related runoff after completion of construction activities. This document will include the provisions provided in Part 2.3.6.a.ii, which includes:

- Use of LID strategies to the maximum extent feasible; and
- Design of treatment and infiltration practices utilizing guidance provided in Volume 2 of the Massachusetts Stormwater Handbook, VA EISA Section 438, or other federally or State approved guidance.

8.2.2 Implement New Development Requirements

New development within the VA Bedford that is part of an applicable construction activity will be designed to follow Massachusetts Stormwater Standards 1,2,5,6 and 9 (see below) and/or more stringent guidelines, which may include internal VA processes and guidance documents.

- Standard 1: No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth;
- Standard 2: Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04;
- Standard 3: Loss of annual recharge to groundwater shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, low impact development techniques,

stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook;

- **Standard 5:** For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.
- **Standard 6:** Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site-specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A “storm water discharge” as defined in 314 CMR 3.04(2)(a)1 or (b) to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.
- **Standard 9:** A long-term operation and maintenance plan shall be developed and implemented to ensure that stormwater management systems function as designed.

Additionally, the VA Bedford will require new development design to either retain the runoff volume equivalent to or greater than 1-inch multiplied by the total post-construction impervious area and/or remove 90% of the average annual Total Suspended Solids (TSS) AND 60% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious area on the site. The VA Bedford will calculate pollutant removal consistent with EPA Region 1’s “BMP Performance Extrapolation Tool” or other BMP performance evaluation tool provided by EPA Region 1. If EPA’s tools do not address the planned or installed BMP performance, the VA Bedford will use a federally or State approved BMP design guidance or performance standard to calculate BMP performance. The VA’s EISA Section 438 largely fulfills these requirements.

8.2.3 Implement Redevelopment Requirements

For sites within the VA Bedford that will be redeveloped as part of an applicable construction activity, the VA Bedford will evaluate development and implementation of post-construction management standards as part of their construction specifications. Consideration will be given to structural and non-structural control measures for site stabilization and discharge elimination, following Massachusetts Stormwater Standards 1, 2, 3, 5 and 6, and/or the VA EISA Section 438, to the maximum extent feasible. A summary of the relevant Massachusetts Stormwater Standards is provided in Section 8.2.2.

Additionally, the VA Bedford will treat stormwater discharges from applicable construction sites with a structural BMP designed to retain the volume of runoff equivalent to, or greater than, 0.80 inch multiplied by the total impervious surface area onsite, OR remove 80% of the average annual TSS load from the total post-construction impervious area onsite AND 50% of the average annual load of TP generated from the total post construction impervious area on the site. The VA's EISA Section 438 largely fulfills these requirements.

8.2.4 Conduct Street and Parking Lot Design Guideline Assessment

Specifications, procedures, and policies involving street and parking lot design will be assessed with respect to determine if changes can be made to support LID options. If the assessment indicates that changes can be made, the VA Bedford will include recommendations and proposed schedules to incorporate changes into relevant documentation to minimize impervious cover.

8.2.5 Submission of As-Built Drawings

As part of the process to confirm long term operation and maintenance requirements associated with post-construction stormwater management features, the VA Bedford will require submittal of as-built drawings depicting on-site stormwater controls (structural and non-structural). Procedures to guarantee long-term operation and maintenance of stormwater management controls will be developed and implemented per control-specific requirements. Measures taken to conform to this Permit requirement will be reported in each Annual Report.

8.2.6 Targeting Properties for BMP Retrofits or Modifications

The VA Bedford will evaluate portions of the site with significant impervious cover, such as parking lots, buildings, and maintenance yards, that could be retrofitted or modified to reduce the frequency, volume, or pollutant load of stormwater discharges from these areas. Although the Permit requires identification of a minimum of five locations for modifications or retrofits during the Permit cycle, the VA Bedford can choose to select this quantity or a smaller quantity of properties due to the size of the campus compared to a traditional MS4. Properties and infrastructure considered for retrofits and/or modifications will be prioritized based on factors including access for maintenance purposes, subsurface geology and depth to the water table (if known), proximity to aquifers and subsurface infrastructure like sanitary sewers/septic systems, and opportunities for use during public education. Schedules for planned capital improvements to storm and/or sanitary sewer infrastructure, as well as paving projects, current condition of the MS4, and control of discharge to water quality limited waters will also be considered.

The retrofit and/or modification status will be summarized in Annual Reports, beginning four years from the effective date of the Permit. This status will include a list of planned structural BMPs and a plan and schedule for the implementation in the Permit Year 5 Annual Report.

Table 8-1 Measurable Goals for Post-Construction Runoff Control Measure

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
5-1	Post-Construction Site Runoff Control Policy			
	GEMS Office; Engineering Office	Implement an effective post-stormwater runoff control program to minimize or eliminate erosion and maintain sediment onsite.	Development of a written Post-Construction Program Manual including references to facility procedures and policies.	End of Permit Year 2
5-2	Stormwater Management in New Development and Redevelopment Program			
	GEMS Office; Engineering Office	Implement a written program to reduce the discharge of pollutants found in stormwater through retention or treatment of stormwater after construction on new or developed sites.	Review and revise facility stormwater policies and procedures in Permit year 2 for consistency Permit requirements.	Permit Year 2
5-3	Street and Parking Lot Design Assessment			
	GEMS Office; Engineering Office	Develop a report assessing requirements that affect the creation of impervious cover, and assess changes that can be made to street and parking lot design requirements to support LID options.	Creation of a report assessing street and parking lot design with respect to implementation of LID design requirements.	By end of Permit Year 4.
5-4	Submission of As-Built Drawings			
	Engineering Office; GEMS Office	Require submittal of as-built drawings, including procedures to guarantee long-term operation and maintenance of stormwater management controls.	Documentation, inventory, and archive of as-built drawings completed within 2 years of project completion, including O&M plans for associated stormwater controls.	No later than 2 years after completion of construction projects, beginning at Permit effective date.

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
5-5	BMP Retrofit and Modification Identification			
	Engineering Office; GEMS Office	Identify up to 5 locations for potential modification or retrofit of BMPs designed to reduce the frequency, volume, and pollutant load of stormwater.	Identification and documentation of locations suitable for retrofit or BMP modifications.	By end of Permit Year 4

9. GOOD HOUSEKEEPING AND POLLUTION PREVENTION

9.1 Good Housekeeping and Pollution Prevention Control Measure

The Good Housekeeping and Pollution Prevention Control Measure focuses on strategies that individual VA Bedford Departments, such as Facilities Management Program, can implement to prevent the pollution of stormwater. As the name implies, a significant portion of this measure is focused on “Good Housekeeping” through proper maintenance and storage of VA Bedford owned equipment and supplies to reduce exposure of outdoor equipment and materials to stormwater runoff. Additionally, this measure addresses implementing schedules for catch basin cleaning and street sweeping, which serves to reduce the amounts and types of pollutants that often accumulate on streets, parking lots, and storage and vehicle maintenance areas that discharge to local waterbodies.

9.1.1 Conduct Inventory of VA Bedford Properties

To facilitate implementation of the development of O&M programs, as described in Section 9.2 above, the VA Bedford will update and maintain an inventory of all facilities listed above that are present onsite, and review and update annually, as needed. The VA Bedford is well-positioned to implement this Permit requirement due to the size of the VA Bedford campus in comparison to a traditional municipality. Information currently stored in the VA Bedford’s WebGIS program can be used to develop this inventory, which will be periodically evaluated and updated, as necessary, during the duration of the Permit. Inventory status will be included in Annual Reports, including updates to the inventory, as applicable.

9.1.2 Develop Stormwater Pollution Prevention Plans

Stormwater Pollution Prevention Plans (SWPPPs) are required to be developed and implemented for permittee-owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater. The VA Bedford does not currently contain any operations that would be regulated by the 2016 MS4 General Permit the National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP). NPDES Construction General Permit requirements are addressed in Section 7. The VA Bedford will periodically evaluate Campus operations throughout the duration of the Permit to verify that no changes have occurred that would require MSGP coverage.

9.1.3 Development of Operations and Maintenance Programs

Operations and maintenance (O&M) programs currently being implemented at the VA Bedford will be evaluated and modified, if necessary, to conform to Permit requirements. O&M programs and stormwater-friendly standard operating procedures will be recorded in written documents (hard copy or electronic) for the following areas of the Campus and/or activities:

- 1) Parks and open spaces:
 - a) Proper use, storage, and disposal of pesticides, herbicides, and fertilizers, including minimizing the use of these products where possible.
 - b) Due to the Campus’s discharges to the Charles River, which has an established TMDL for phosphorus, additional procedures will be established for management of grass cuttings and leaf litter including prohibition of blowing organic waste materials onto adjacent impervious surfaces; and increased street sweeping of streets and parking lots to two times per year (see section 9.3.3).
 - c) Pet waste handling procedures;

- d) Waterfowl waste management;
 - e) Trash receptacle management; and
 - f) Vegetation establishment to mitigate erosion.
- 2) Buildings and Facilities:
- a) Use, storage, and disposal of petroleum products and potential stormwater pollutants, including provision of employee training, as necessary;
 - b) Development of Spill Prevention Plans, if applicable;
 - c) Dumpster and waste management equipment procedure development;
 - d) Implementation of parking lot and facility adjacent sweeping programs.
- 3) Vehicles and Equipment:
- a) Establishment of vehicle and equipment storage procedures, including leak detection and mitigation processes;
 - b) Evaluation of fueling areas; and
 - c) Processes for vehicle and equipment washing.

The VA Bedford will report on the status of O&M Programs being implemented, as well as maintenance activities associated with each O&M Program, as described in the following sections.

9.1.4 Implement Catch Basin Cleaning Program

The VA Bedford inspects catch basins twice per year to determine whether they require cleaning or maintenance activities. Catch basins are cleaned twice per year based on these inspection findings, in the spring and the fall, by an outside contractor. During catch basin inspections, cleaning and maintenance will be prioritized for catch basins located near construction activities, with cleanings occurring more frequently if excessive sediment or debris is noted. All catch basins will be cleaned at a frequency designed to verify that catch basins are no more than 50 percent full at the time of cleaning.

The VA Bedford uses internal personnel to clean catch basins. VA Bedford will record and retain all records pertaining to the quantity of catch basins inspected, cleaned, and quantity of materials removed from catch basins and transported off-site for disposal. This information will be summarized annually in the Annual Report. If catch basin cleanings are stored at the Campus, they will be stored securely in a location that will not discharge to receiving waters.

In accordance with MassDEP regulations, policies and guidance, catch basin cleanings are classified as solid waste and can be landfill disposed so long as the landfill is permitted to accept solid waste. For further information regarding MassDEP policies related to catch basin cleanings, refer to:

<https://www.mass.gov/files/documents/2018/03/09/catch-basins.pdf>

9.1.5 Implement Street Sweeping Program

The VA Bedford performs street sweeping maintenance activities. Per Permit requirements, the VA will perform street sweeping a minimum of once per year in the spring, after winter activities such as salting and sanding have ceased.

The VA Bedford will record volumes of street sweepings collected during routine street sweepings and estimate other street sweeping volumes generated during routine facility maintenance for inclusion in Annual Reports. Spoils derived from street sweeping activities will be disposed in accordance with MassDEP Policy #BAW-18-001: Reuse and Disposal of Street Sweepings (<https://www.mass.gov/files/documents/2018/05/14/street-sweepings.pdf>), which provides several options for street sweeping disposal, including landfill disposal, use of fill in public ways, and restricted use compost additive. Street sweepings will be stored securely in a location that will not discharge to receiving waters.

Information obtained during implementation of the catch basin cleaning program will be used to evaluate and adjust street sweeping frequencies and locations, if required. Specifically, where catch basins are observed to be greater than 50 percent full or located in an area of the VA Bedford that has been identified as contributing increased pollutant loads, or any other area where land use activities may contribute to the discharge of pollutants to stormwater, street sweeping will be conducted more frequently.

9.1.6 Implement Road Salt Use Optimization Program

Winter road maintenance activities will be evaluated to minimize the use of sodium chloride and other salts and evaluate opportunities for use of alternative deicing materials. The use and storage of sand and salt will be conducted in a manner that minimizes exposure to weather and potential transport via catch basins, topography, or other mechanisms to the MS4 and/or waterbodies receiving discharge from the site.

9.1.7 Conduct Inspection and Maintenance of Stormwater Treatment Structures

Any stormwater treatment structures located at the VA Bedford will be inspected annually, at a minimum, to verify that they are in good working condition. Maintenance to stormwater treatment structures will occur in a timely manner if issues are identified during inspection. Stormwater treatment structures can include, but are not limited to, water quality swales, retention/detention basins, infiltration structures, and proprietary treatment devices.

9.1.8 Employee Training Programs

While VA Bedford provides various training for its employees the focus of stormwater related training topics primarily falls to Facilities Management employees, a majority of whom, work at or near catch basins and outfalls. Training topics for Facilities Management employees include: Stormwater Management, Oil Spill Prevention, Control, and Countermeasure (SPCC), Fuel Oil Delivery and Oil Handling. These trainings are in addition to the various annual safety and environmental trainings determined by the Facilities Program Manager.

Table 9-1 Measurable Goals for Pollution Prevention / Good Housekeeping Control Measure

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
6-1	Conduct Inventory of VA Bedford Properties			
	GEMS Office; Engineering Office	Develop inventory of VA Bedford owned facilities and activities with potential to generate stormwater pollutants.	Creation and maintenance of facility inventory list.	By end of Permit Year 1
6-2	Develop Stormwater Pollution Prevention Plans			
	GEMS Office; Engineering Office	Develop and implement SWPPPs for relevant VA Bedford facilities.	Initiate and develop SWPPPs (and Spill Prevention Countermeasure and Control (SPCC) Plans, as needed) for maintenance garages, public works yards, transfer stations, and waste handling facilities, as applicable.	End of Permit Year 2
6-3	Implement Operations & Maintenance (O&M) Procedures			
	GEMS Office; Engineering Office	Establish a written program detailing activities and procedures for MS4 property maintenance to reduce discharge of pollutants.	Development of written procedures to minimize pollutant discharges to the MS4 for facilities and activities identified in the inventory.	End of Permit Year 2.
6-4	Implement Infrastructure O&M Procedures			
	GEMS Office; Engineering Office	Establish a written program detailing procedures for MS4 infrastructure maintenance.	Development and implementation of written procedures to reduce or eliminate discharge of pollutants from the MS4.	End of Permit Year 2.

BMP ID#	Responsible Party/Department	BMP Description	Measurable Goal	Implementation Deadline
6-5	Implement Catch Basin Cleaning Program			
	GEMS Office; Engineering Office	Develop a catch basin cleaning SOP in accordance with Permit requirements.	Establish and implement procedures and schedule for catch basin cleaning in concurrence with Permit requirements.	End of Permit Year 1
6-6	Implement Street Sweeping Program			
	GEMS Office; Engineering Office	Develop a street sweeping SOP in accordance with Permit requirements.	Implement street sweeping procedures in accordance with Permit requirements.	Report on status annually
6-7	Implement Road Salt Use Optimization Program			
	GEMS Office; Engineering Office	Establish and implement procedures for winter road maintenance.	Implementation of procedures to minimize use of salts during winter road maintenance.	Report on status annually
6-8	Conduct Inspection and Maintenance of Stormwater Treatment Structures			
	GEMS Office; Engineering Office	Establish and implement inspection/maintenance procedures for stormwater treatment structures (excluding catch basins).	Conduct inspections of stormwater treatment structures, perform maintenance activities in a timely manner if issues are identified during inspections.	Report on status annually

10. PROGRAM EVALUATION, RECORDKEEPING, AND REPORTING REQUIREMENTS

Successful implementation of the Permit is not tied to specific water quality limits associated with stormwater discharges. Instead, Permit compliance involves successful implementation of BMPs designed to reduce pollutant loading to waterbodies. This flexibility allows the permittee to develop specific measures customized to fit their facility's operations; however, it may be more difficult to measure the successful implementation of the MS4 program without specific numeric criteria to compare to. As such, the permittee often must rely on professional judgement combined with information obtained during implementation of the Permit to effectively evaluate their program.

This section provides the framework by which the VA Bedford will evaluate their MS4 stormwater management program, as well as record keeping and related Permit reporting requirements.

10.1 Program Evaluation

The MS4 stormwater management program evaluation relies on the implementation of Permit requirements, which are the primary references for the program evaluation. The VA Bedford will self-evaluate its compliance with Permit conditions annually, and record the self-evaluation in the Annual Report.

Each BMP described in this SWMP will be evaluated against its appropriateness in achieving the measurable goal of the related control measure (i.e. Public Involvement and Participation, etc.). If a BMP is determined to be ineffective, it will be augmented or changed by adding components or controls to that BMP or, replacement. If a BMP is replaced, that section of the SWMP describing the BMP must also be updated to reflect the change. Updates to the SWMP must include an analysis of why the BMP being replaced is ineffective or infeasible, expectations on the effectiveness of the replacement BMP; and an analysis of why the replacement BMP is expected to achieve the defined goals of the BMP to be replaced. Any BMP modifications or replacements will be documented in the Annual Report.

10.2 Record Keeping

All records required as part of the implementation of the Permit will be kept for at least five years. Records include information used in the development of any written program required by the Permit, monitoring results, copies of reports, records of screening, follow-up and elimination of illicit discharges, maintenance records, inspection records, and data used in the development of the notice of intent (NOI), SWMP, SWPPPs (as applicable), and Annual Reports.

These records will be made available to the public for review during normal business hours. The VA Bedford may choose to implement this Permit requirement by posting relevant records online. All hard copies of stormwater related records are to be maintained in the GEMS Program Manager's office.

10.3 Annual Report

The VA Bedford must submit an Annual Report that contains information regarding activities associated with the SWMP BMPs that occurred during the previous reporting year period – July 1 thru June 30, except for the first annual report under this Permit, which will cover the period from May 1 of the last annual report submittal to June 30 of that reporting period. The initial report covering the activities mandated by the 2016 MS4 General Permit is due on September 29, 2019, and is to be submitted annually thereafter. This first Annual Report will cover the period from May 1, 2018 to July 1, 2019.

In Massachusetts, where EPA and the State of Massachusetts are the joint permitting authorities, reports must be submitted annually to both EPA Region 1 and the Commonwealth of Massachusetts within 90 days from the closing of the reporting period. Submittal mailing information is presented in Section 10.3.3.

10.3.1 Annual Report Purpose and Content

Per Part 4.4 of the Permit, the VA Bedford is required to review the measurable goals presented in this BMP and evaluate whether the associated BMPs were effective toward achieving the measurable goals, terms and conditions of the Permit. This evaluation is summarized annually in the Annual Report, which documents the status of the VA Bedford Stormwater Management Program. Tables summarizing Permit requirements for each CM, as well as the information that must be included in each Annual Report, are included as Appendix E. In addition to these reporting requirements, the VA Bedford should review the latest Massachusetts Integrated List of Waters to determine whether the impaired or TMDL status of any waterbodies receiving MS4 discharges from the VA Bedford have changed. A change in a waterbody's impaired or TMDL status may trigger additional implementation of BMPs.

10.3.2 Signature and Certification Requirements

Annual reports must be signed and include a certification in accordance with Part VI.G. of the Permit (specifically, 40 CFR 122.22). The language for this signatory requirement is provided in Section 10 of this SWMP. Signatory requirements included at 40 CFR 122.22 are excerpted here below and the required certification language is included above the signature block in the attached discretionary reporting format.

40 CFR 122.22 (Excerpted):

(a) Applications. All permit applications shall be signed as follows:

(3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official.

(b) ... or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this section;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,

(3) The written authorization is submitted to the Director.

10.3.3 Mailing Information

VA Bedford must submit the annual SWMP reports to each of the following agencies:

U.S. Environmental Protection Agency
Stormwater and Construction Permits Section (OEP06-1)
Five Post Office Square, Suite 100
Boston, MA 02109

Massachusetts Department of Environmental Protection
One Winter Street - 5th Floor
Boston, MA 02108
ATTN: Frederick Civian

The GEMS Program Manager is responsible for submitting copies of the annual reports to EPA and MassDEP.

Reports may also be submitted electronically to the EPA at the following email address: stormwater.reports@epa.gov.
After December 21, 2020, all Annual Reports must be submitted electronically.

NOTE: Each report submittal requires an original certification signature page.

11. SIGNATORY REQUIREMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

Title

Signature

Date

FIGURES

Figure 1: Site Locus

FIGURES

Figure 2: VA Bedford Stormwater Collection System

**APPENDIX A: NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES
FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS
IN MASSACHUSETTS**

APPENDIX B: ANNUAL REPORTING TABLES

APPENDIX C: NOTICE OF INTENT

APPENDIX D: ELIGIBILITY DOCUMENTATION

APPENDIX E: SANITARY SEWER OVERFLOW INVENTORY

Sanitary Sewer Overflow Inventory

Location	
Did SSO enter waterbody directly or through MS4 discharge?	
Date and Time of SSO Occurrence	
Estimated Volume of SSO	
Known or suspected cause of SSO	
Corrective Measures and Dates Implemented	
Planned Corrective Measures and Implementation Schedule	

Note: As of August 2018, no SSOs have occurred at the VA Bedford Campus within the previous 5 years. In the event of a SSO this table will be updated accordingly.

APPENDIX F: ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

APPENDIX G: CONSTRUCTION SITE RUNOFF PROGRAM

APPENDIX H: RECORD OF CHANGES

DESCRIPTION OF CHANGE	REASON FOR CHANGE
<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Signature: _____ Date: _____	
<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Signature: _____ Date: _____	
<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Signature: _____ Date: _____	
<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Signature: _____ Date: _____	



woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS